











ECOFACT CALENDAR FOR UNDERTAKING ECOLOGICAL SURVEY AND MITIGATIONS

This table has been prepared to provide guidance for undertaking ecological surveys and mitigation works. It is neither definitive nor does it constitute an official document. Species and habitat surveys will be individually affected by climate and weather conditions etc. and this may alter the suitability of survey periods.

Where proposed surveys or mitigations include the disturbance, capture or translocation of protected species or interference with their dwellings, it is likely that a derogation licence will be required from the National Parks and Wildlife Service or the Department of Communications, Energy and Natural Resources. This applies to both terrestrial and aquatic species.



TERRESTRIAL ECOLOGY SURVEY AND MITIGATION CALENDAR

Limited mitigation

not recommended

Mitigation works not possible/

		Licence		_		T .		· .	T .	 			Mosses and liche Clearance planting and i mitigations Winterin of trees and scrub to wintering bird ger activity / sett s The hibernation re Works on ma Activity surveys Deciduous surv Works p carried out year re creation / riparia. Surveys not possi			
Ecological	interest	required	J	F	М	A	М	J	J	A	S	0	N	D		
Terrestrial	ecological inte	rests														
Habitats and flora	Survey			Phase 1 habitat s ses and lichens	survey	Opti	mal botanical s	eason	Sub-optimal Phase 1 habitat survey. Mosses and lichens							
	Mitigation	✓	Clearance works a translocation mitig		Sub-optima	al for planting		ance works. Utranslocation			possible. S	ce works Sub-optimal lanting	planting and transl mitigations pos Wintering bird e of trees and scrub acts to wintering bird habi adger activity / sett surve	translocatio		
Birds	Survey		Wintering	migrants	irds, passage & breeding rds						age migrants & Winterin		ng birds			
	Mitigation	✓	Clearance of tree Note: Avoid impac bird hab	cts to wintering		No clearanc	e of vegetation	during bird ne	esting season		Note: .		Wintering bird e of trees and scrub cts to wintering bird habit dger activity / sett survey Se Winter hibernation roosts			
Badgers	Survey		Badger a	Badger activity / sett surveys Sub-optimal survey period							Badger activity / sett surveys					
	Mitigation	+	No	disturbance of ex	xisting setts –	artificial sett cr	eation only			Se	tt closure/dest	ruction	See Winter hibernation roosts	See Jan		
Bats	Survey	+	Winter I	hibernation roosts	3	Optimal activity surveys							Winter hibernation roosts			
	Mitigation	+	Works on mate	naternity and ion roosts						naternity and ion roosts	Clearance work planting and transmitigations positive frees and scrub at wintering bird habiter activity / sett surveys Works on maternit Activity surveys Deciduous woo surveys Works possicarried out year round creation / riparian places.	ternity roost				
Otter	Survey		Activity su	urveys		Sub-	optimal survey	period due to	riparian vege	tation			Activity survey	S		
	Mitigation	+	Year round mitigation, but must avoid breeding otter holts										Clearance works ar planting and transloca mitigations possible Wintering birds of trees and scrub at the wintering bird habitat. Ger activity / sett surveys See Junter hibernation roosts Works on maternity round acreation / riparian planting surveys not possible			
Pine marten	Survey		Deciduou	s woodland surve	eys		No	Opti ote: breeding o	mal survey pe den surveys ir		ay		planting and transloca mitigations possible Wintering birds of trees and scrub obts to wintering bird habitat. dger activity / sett surveys See J Winter hibernation roosts Works on maternity ro Activity surveys Deciduous woodlar surveys Works possible e carried out year round at creation / riparian planting Surveys not possible			
	Mitigation	+	Works possible				Avoid		Works possible							
Whorl	Survey	+	Surveys can b	oe carried out yea	ar round	0	ptimal survey p	eriod, with dry	/ periods avoi	ded.	Su	rveys can be o	of trees and scrub ets to wintering bird habitat. dger activity / sett surveys See J Vinter hibernation roosts Works on maternity ro Activity surveys Deciduous woodlar surveys Works possible e carried out year round at creation / riparian planting Surveys not possible	round		
snails	Mitigation	+ ✓	Habit	tat creation / ripar	rian planting		Translocation	ons recomme	nded during v	egetative grov	ving period	Habitat		n planting		
Marsh	Survey	+	Surve	eys not possible		Adult surveys in the early season / Caterpillar surveys in the late season							Surveys not possible			
fritillary	Mitigation	+ ✓	Habitat creation / p	No impacts to potential adult breeding habitat Caterpillar translocation Habitat						t creation and planting of Devil's Bit Scabious						

Licence may be required for interfering with Annex I habitat or Natura 2000 site

Sub-optimal survey period

Survey not possible/

not recommended



FRESHWATER ECOLOGY SURVEY AND MITIGATION CALENDAR

			Month												
Ecological interest		Licence required	J	F	М	A	М	J	J	A	s	О	N	D	
Freshwater ecolog	ical interests	\$													
River corridor / River Habitat Survey	Survey		River Habitat Su	rvey possible			Optimal b	otanical surve	/ period			RIver Habitat Survey possible			
(RHS)	Mitigation	✓	Note: Avoid instre	n works possible eam works during wning season				an and instrea Avoid lamprey	Riparian works possible Note: Avoid instream works during salmonid spawning season						
Adult salmonids	Survey			counters											
		#✔	Redd count	1	ed to habitat s	suitability		Licensing pe	riod for elec		Survey limited to habitat suitability assessments				
	Mitigation	# 🗸	Avoid instream v	vorks during salm	g season	Instream works possible Note: Avoid lamprey spawning habitat					Avoid instream works during salmonid spawning season				
Juvenile salmonids	Survey	#	Smolt trapping	not possible		Smolt censu	IS	Smolt trapping not possible Smolt census				Smolt trapping not possible			
		#	Survey limited to hab	bitat suitability ass data	sessments and	d fish counter	0 1	Licensing period for electrical fishing surveys recommended					Survey limited to habitat suitability assessments and fish counter data		
	Mitigation	#✓	Avoid instream v	vorks during salm	onid spawnin	g season		Instrea Note: Avoid la	m works po <i>mprey spav</i>	Avoid instream works during salmonid spawning season					
Lamprey species	Adult lamprey survey	#		ostream migrating orey possible	ı adult	redd counts.	servation of adult spawning activity and No trapping / handling of adult lampreys commended during this period.					of upstream migrating adult lamprey possible			
	Juvenile lamprey	#	Lamprey trapping not possible	Trapping of o	downstream r	nigrating juver	nile lamprey Lamprey trapping not possible					Trapping of downstream migrating juvenile lamprey			
	survey	#	Manual	amm	ical fishing for lamprey Electrical fishing for mocoetes possible. Id lamprey spawning habitat recommende			nsformers Manual searches for inveniles possible							
	Mitigation	# 🗸	Instream works pos Note: Avoid instre	r spawning season (sea, river and brook no instream works recommended within lamprey spawning habitat Recommended period for instream works following translocation of iuveniles				translocation of juveniles.							

- Optimal survey period

 Sub-optimal survey period

 Limited mitigation

 Survey not possible/
 not recommended

 Optimal mitigation period

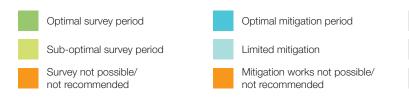
 Limited mitigation

 Mitigation works not possible/
 not recommended
- + Licence required from NPWS for handling or interfering with protected species
- ✓ Licence may be required for interfering with Annex I habitat or Natura 2000 site
- # Licence required from the Department of Communications, Energy and Natural Resources



FRESHWATER ECOLOGY SURVEY AND MITIGATION CALENDAR continued

								Month						
Ecological interest		Licence required	J	F	М	A	М	J	J	A	s	O	N	D
Freshwater ecolog	ical interest	s												
Freshwater pearl	Survey	+			Survey possil	ole year round	d in good sunsh	ine and low flo	ow conditions	s. Avoid high f	lows / high tu	rbidity.		
mussel	Mitigation	+ 🗸		,	Avoidance is p	oreferable for	this species; ins	stream works,	capture or tr	anslocation ar	e not recomn	nended		
White-clawed crayfish	Survey	+	Sub-optimal, reduc	ced activity, femal	es with ova	Females with young – sub-optimal Optimal survey period						Mating peri	Sub- optimal, reduced activity	
	Mitigation	+ 🗸	Low activity, av translocation			Note: Avo	Capture and ex	Low activity, avoid capture/translocation measures						
Other	Survey		Sub-optimal su	urvey period			Optir	Sub-optimal survey period						
macroinvertebrates and biological water quality surveys	Mitigation													
Amphibians	Survey	+	Hibernation, some activity from mid- February Optimal survey period during breeding, spawning and activity period								Hibernation			
	Mitigation		Hibernation period works. Mitigations I creation and m	imited to habitat	Tr	apping of adu	ults, tadpoles ar Instre	Hibernation period – avoid instream works. Mitigations limited to habitat creation and management						
Macrophytes	Survey		Sub-opt	imal survey period	t l			Sub-optimal survey period						
	Mitigation	√ +		cluding habitat cre likely to be limited			Instream v	vorks possible C	including se ompensation	for habitat	Instream works including habitat creation and translocation possible, but likely to be limited by other receptors.			

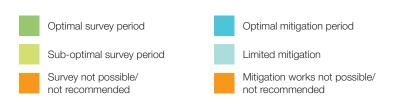


- + Licence required from NPWS for handling or interfering with protected species
- Licence may be required for interfering with Annex I habitat or Natura 2000 site
- # Licence required from the Department of Communications, Energy and Natural Resources



MARINE ECOLOGY SURVEY AND MITIGATION CALENDAR

								Month							
Epifauna S Intertidal habitats Benthic habitats	t	Licence required	J	F	М	А	М	J	J	А	S	О	N	D	
Marine ecological	interests														
Algal species	Survey		S	Sub-optimal survey	y period				Sub-optim	al survey period					
	Mitigation	√ #				М	itigation can pot	entially be ca	rried out in an	y month					
Epifauna	Survey		Sub-opt	imal survey period	d	Optimal activity and survey period							Sub-optimal survey period		
	Mitigation	√ #			Mitigat	ion can poten	tentially be carried out in any month, species specific requirements apply								
Intertidal	Survey		Sub-opt	imal survey period	d			Sub-optimal survey period							
habitats	Mitigation	√ #			Mitigation ca	an potentially be carried out in any month, species and habitat specific requirements apply									
			Note: Avoid works during winter months at sites containing sensitive wintering birds												
Benthic habitats	Survey		Year round survey period												
	Mitigation	√ #			Mitigat	ion can poten	tially be carried	out in any mo							
Seabirds	Survey		Wintering s	seabirds	passage i	seabirds, migrants & seabirds	Breeding seabirds				Passage migrants & wintering seabirds		Wintering	seabirds	
	Mitigation	√ #	Mitigation can potentially be carried out in any month, species specific requirements apply regarding wintering / br										ulations		
Marine mammals	Survey	+		Su	rvey for marine	e mammals m	ay occur year-ro	ound taking ac	ccount of spe	cies specific n	novements / m	nigrations			
	Mitigation	+√#		Ti	ming of works	must conside	er seasonality wi	th regard to b	reeding seaso	on, nursing of	young and ter	ritoriality			



- + Licence required from NPWS for handling or interfering with protected species
- Licence may be required for interfering with Annex I habitat or Natura 2000 site
- # Licence required from the Department of Communications, Energy and Natural Resources